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## NOTICE OF ALLOWANCE AND FEE(S) DUE

32628 7590 02/15/2011  
KANESAKA BERNER AND PARTNERS LLP  
1700 DIAGONAL RD  
SUITE 310  
ALEXANDRIA, VA 22314-2848

EXAMINER

BARROW, AMANDA J

ART UNIT

PAPER NUMBER

1729

DATE MAILED: 02/15/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,702

09/28/2006

Ryoichi Okuyama

KPO-004

1795

TITLE OF INVENTION: ELECTRIC AUTOMOBILE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/16/2011

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

32628 7590 02/15/2011  
**KANESAKA BERNER AND PARTNERS LLP**  
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SUITE 310  
ALEXANDRIA, VA 22314-2848

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,702 09/28/2006 Ryoichi Okuyama KPO-004 1795

TITLE OF INVENTION: ELECTRIC AUTOMOBILE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$300 \$0 \$1810 05/16/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
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BARROW, AMANDA J 1729 429-034000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/594,702	09/28/2006	Ryoichi Okuyama	KPO-004	1795

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EXAMINER
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BARROW, AMANDA J

ART UNIT	PAPER NUMBER
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1729

DATE MAILED: 02/15/2011

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 675 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 675 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/594,702	OKUYAMA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	AMANDA BARROW	1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/5/2011.
2. ☒ The allowed claim(s) is/are 47-77.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

/AMANDA BARROW/  
Examiner, Art Unit 1795

/Ula C Ruddock/  
Supervisory Patent Examiner, Art Unit 1729

## **DETAILED ACTION**

### **Status of Application**

1. The Applicant's amendment filed on 1/5/2011 was received. Claims 47-50 and 58-64 were amended. No claims have been cancelled or newly added. The restriction requirement on species 2, claims 49, 50 and 54-57, is withdrawn and the claims are now also allowable due to their dependency on allowable independent claims.
2. The texts of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on 3/30/2010.

### **Priority**

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. The Applicant was advised in the previous action that should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action (37 CFR 41.154(b) and 41.202(e)) in order to overcome the reference Ye et al., "Electrochemical Reactions in a DMFC under Open-Circuit Conditions," Electrochemical and Solid-State Letters, 8 (1) A52-A54 (2005) used to reject independent claims 47 and 48. Ye et al. was considered an intervening reference and has been overcome by the certified English translation of the foreign application provided in reply to this action. 37 CFR 41.154(b) and 41.202(e).

### **Election/Restrictions**

4. Claims 47, 48, 51-53 and 58-77 are allowable. The restriction requirement between species 1 and 2, as set forth in the Office action mailed on 10/15/2009, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 49, 50, and 54-57, directed to dependent species claims are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim as they are in dependent form on allowable claims.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

### **Specification**

5. The objection the specification is withdrawn as the Applicant has submitted a new abstract.

**Claim Rejections - 35 USC § 112**

6. The claim rejections under 35 U.S.C. 112, first paragraph, on 47, 48, 51-53 and 58-77 are withdrawn because the claims have been amended or cancelled.

**Claim Rejections - 35 USC § 103**

7. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over Kosek et al. (US 2003/0062268) in view of Narayanan et al. (US 2003/0226763) and evidenced by "Chemical Reaction" from Britannica Online Encyclopedia on claims 47, 51, 52, 58-65, 67, 70-74, 76 and 77 are withdrawn as the claims have been amended. All rejections pending from this are thus also withdrawn due to the remaining claims' dependency on independent claim 47.

The rejections under 35 U.S.C. 103(a) as being unpatentable over Ye et al., "Electrochemical Reactions in a DMFC under Open-Circuit Conditions," Electrochemical and Solid-State Letters, 8 (1) A52-A54 (2005) in view of Narayanan et al. (US Patent Application 2003/0226763) on claims 47 and 48 are withdrawn as the Applicant has perfected their foreign priority and overcome this reference (see priority section for further details). All rejections pending from this are thus also withdrawn due to the remaining claims' dependency on independent claim 48.

**Terminal Disclaimer**

8. The terminal disclaimers filed on 1/5/2011 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of co-pending



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applications 10/594711, 11/794320, 11/988034, 11/794357 and U.S. Patent No. 7,476,456 have been reviewed and are accepted. The terminal disclaimers have been recorded.

### **Allowable Subject Matter**

9. Claims 47-77 are allowed. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach an electric automobile comprising at least a fuel cell for power generation by supply of hydrogen and oxidizing agent, a hydrogen generating device for generating a gas containing hydrogen to be supplied to the fuel cell, and a motor driven by electricity generated by the fuel cell, wherein: the hydrogen generating device generates gas containing hydrogen by decomposing an organic compound-containing fuel, the hydrogen generating device comprising: a proton conductive partition membrane, a fuel electrode provided on one surface of the partition membrane, the fuel electrode directly generating the gas containing hydrogen, means for supplying the organic compound containing fuel and water to the fuel electrode, the organic compound-containing fuel being capable of producing a proton as a result of electrochemical oxidization which can pass through the proton conductive partition membrane, an oxidizing electrode provided on the other surface of the partition membrane, means for supplying the oxidizing agent to the oxidizing electrode, and means for generating and collecting the gas containing hydrogen from the fuel electrode (independent claim 47), nor does the prior art teach an electric automobile comprising: at least a fuel cell for power generation by supply of hydrogen and oxidizing agent, a hydrogen generating device for generating a gas containing hydrogen to be supplied to the fuel cell, and a motor driven by electricity generated by the fuel cell, wherein: the hydrogen generating device

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generates gas containing hydrogen by decomposing an organic compound-containing fuel, the hydrogen generating device comprising: a proton conductive partition membrane, a fuel electrode provided on one surface of the partition membrane, the fuel electrode directly generating the gas containing hydrogen, means for supplying organic compound containing fuel and water to the fuel electrode, the organic compound-containing fuel being capable of producing a proton as a result of electrochemical oxidization which can pass through-the proton conductive partition membrane, an oxidizing electrode provided on the other surface of the partition membrane, means for supplying the oxidizing agent to the oxidizing electrode, and means for generating and collecting the gas containing hydrogen from the fuel electrode, wherein the hydrogen generating device is an open circuit having neither means for withdrawing electric energy to outside from a hydrogen generating cell constituting the hydrogen generating device, nor means for providing electric energy from outside to the hydrogen generating cell (independent claim 48).

The closest art found by the Examiner, Ye et al., “Electrochemical Reactions in a DMFC under Open-Circuit Conditions,” *Electrochemical and Solid-State Letters*, 8 (1) A52-A54 (2005), discloses the use of membrane electrode assembly having two electrodes (i.e., anode/fuel electrode and cathode/oxidant electrode) sandwiching a Nafion membrane (“partition membrane”) which are provided two channels formed on both the cathode and anode side for delivering oxygen and methanol (“fuel containing an organic compound”), respectively (Experimental section). The cell (“hydrogen generating device”) is maintained under open-circuit conditions and the evolution of hydrogen gas is observed which was collected from the

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anode (pg. A52, column 1, third paragraph and pg. A54, column 1, paragraph 1). Applicant has perfected their foreign priority thus overcoming this reference.

The closest art of record, Kosek et al. (US 2003/0062268) does not disclose that the fuel electrode directly generates the gas containing hydrogen as recited in the claim. Furthermore, the closest prior art found by the Examiner in an updated search is EP 0,438,902 by Thomas Cable. EP '902 discloses as illustrated in Figure 1 an electrochemical reactor with a first zone 2 ("oxidizing electrode") into which oxygen-containing feed gas is fed and second zone 3 ("fuel electrode") into which an oxygen-consuming gas such as methane or natural gas is introduced with steam ("organic compound and water") (page 5, line 47 through page 6, line 14 and page 15, lines 11-13). Exit port 14 allows the reacted gases which have been reacted from natural gas or a hydrocarbon to form hydrogen to be collected directly from the second zone 3 ("fuel electrode") (page 4, lines 14-23). Furthermore, an electric circuit for withdrawing/ providing energy is only an optional component and is not a necessary entity to the invention- see page 14, lines 41-43. However, EP '902 discloses that the partition membrane element 4 is an oxygen- and electron-conducting material formed between oxides containing divalent and trivalent cations (pg. 7, lines 22-57). Such a partition membrane is not considered a "proton conductive partition membrane" as recited in the claim, as such materials are not capable of conducting protons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMANDA BARROW whose telephone number is (571)270-7867. The examiner can normally be reached on 7:30am-5pm EST. Monday-Friday, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ula Ruddock can be reached on 571-272-1481. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AMANDA BARROW/  
Examiner, Art Unit 1729

/Ula C Ruddock/  
Supervisory Patent Examiner, Art Unit 1729